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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,324	11/17/2003	Peter John Hunt	1171/41475/56B/106/107	5106

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EXAMINER

PAIK, SANG YEOP

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 02/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/715,324

Applicant(s)

HUNT ET AL.

Examiner

Sang Y. Paik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29, 31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-29, 31 and 32 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 16, 17, 18, 31 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Daniell et al (US 5,558,084).

Daniell shows the breathing assistance apparatus having an electrical input power to activate a heater capable of humidifying the gas at the desired level, and a controller (11, 16) to determine the parameter such as the temperature of the humidified gas which relates to the flow rate of the gas. The heater includes the conduit heater (10) and the water heater (20), and Daniell further shows an ambient external temperature sensor (45), a humidification chamber (3) having the water heater (20) and a water heater sensor/chamber sensor (8) to monitor the parameter such as the temperature of the water heater, the controller which monitors or regulates the desired heating temperature with the input of the external temperature indicated by the external temperature sensor, a connector means (66) which enable to correctly connect the conduit heater to the controller, and an indicator (67, 62) which indicates proper functions of the apparatus.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-7, 13, 14, 19-23 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniell (US 5,558,084).

Daniell shows the apparatus and method claimed except explicitly showing the controller to continuously monitor the claimed parameter and to follow the claimed steps.

Daniell teaches that the heating elements are controlled in response to the temperature sensors that measure the temperature of the water heater as well as the conduit heater and the ambient temperature. As the temperature falls or arises due to the surrounding conditions, the heaters are further controlled to be turned off or on.

While the Daniel does not shows explicitly show the sequence of the claimed steps, it would have been obvious to provide the controller with such monitoring processes or steps to monitor the changes in the threshold parameter values, including the changes in the temperatures, flow rate, or any other related parameters, so that the power to the water heater as well as the conduit heater can be continuously adjusted to maintain the desired humidity or gas temperature as the they are susceptible to the surrounding elements to affect its efficiency to meet the desired humidified gas.

5. Claims 8, 9, 12, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniell et al (US 5,558,084) in view of McComb (US 5,349,946) or Clementi (US 5,031,612).

Daniell shows the apparatus and method claimed except the gas supply means to supply gas to the humidifier.

McComb shows a gas supply with a flow meter/sensor to supply gas and the processor to determine the desired humidity level at the given flow rate. Clementi also shows a gas supply

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such as a blower to provide the pressured gas flow to provide the desired humidified gas. In view of McComb or Clementi, it would have been obvious to one of ordinary skill in the art to adapt Daniell with the gas supply means to provide the air source that is humidified for the user and to control the rate at which the air/gas is provided.

6. Claims 10, 11 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniell in view of McComb or Clementi as applied to claims 8, 9, 12, 24 and 25 above, and further in view of Rapoport et al (US 5,546,933).

Daniell in view of McComb or Clementi, shows the apparatus and method claimed except the gas supply having a fan with the variable speed electric motor.

Rapoport shows a blower having a variable speed blower motor to supply air. In view of Rapoport, it would have been obvious to one of ordinary skill in the art to adapt Daniell, as modified by McComb or Clementi, with the variable speed motor fan to control the amount of gas and the rate at which the gas is supplied.

Allowable Subject Matter

7. Claim 15 would be allowed when the informality objected under the claim objection is corrected.

Response to Arguments

8. Applicant's arguments filed 12/5/05 have been fully considered but they are not persuasive.

The applicant argues that the temperature of the humidified gas is not related to the overall flow rate of the gas since temperature and flow rate are independent variable. The applicant argues that while higher temperature affects faster individual atoms and molecules in

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the gas, this would not affect the overall flow rate of the gas in particular direction, and further argues that it is possible to produce gas at high temperature at low or high flow rate.

The examiner would not contend the possibilities of producing high or low gas temperature either at low or high gas flow rate. However, the examiner would maintain that the temperature of the humidified gas is a parameter that relates to the flow rate of the gas. The flow rate can be controlled in various ways, and one of the ways to affect such rate can be related to the temperature of the humidified gas where higher the temperature, faster the atoms and molecules would move creating higher pressure within the humidification chamber. This would allow faster flow rate out of the humidification chamber.

The applicant argues claims 3 and 19 relate to monitoring the condition of the water heater. Daniell teaches that the water heater is monitored in response to the temperature sensor, and as the temperature falls or arises, the heater is further controlled to be turned off and on. The parameters would relate to that of the desired temperature conditions reaching and maintaining such conditions.

With respect to claims 5, 13 and 21, it is noted that the monitoring changes relating or indicative of obstructions and blockage in the system is not claimed.

With respect to claims 16 and 31, Daniell clearly shows a connector (66) that is correctly connected to the controller such that when undesirable circumstance and faults are detected, the controller or processor would energize the indicator (62).

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y. Paik whose telephone number is 571-272-4783. The examiner can normally be reached on M-F (9:00-4:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Paik

Sang Y Paik
Primary Examiner
Art Unit 3742

syp